

Spiders from Laos with description of a new species and new records (Arachnida: Araneae)

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Abstract — Spider collections from Laos, especially from Oudomxai and Bolikhamsay Provinces, are investigated. One new species of the family Corinnidae is described: *Serendib muadai* spec. nov. (male, female) from Bolikhamsay Province. Seventeen species are newly recorded from Laos: *Macrothele bannaensis* Xu & Yin 2001, *Cyclocosmia siamensis* Schwendinger 2005, *Pseudanapis parocula* (Simon 1899), *Nerienne macella* (Thorell 1898), *Tetragnatha hasselti* Thorell 1890, *Cyrtophora cylindroides* (Walckenaer 1841), *Larinia phthisica* (L. Koch 1871), *Cheiracanthium insigne* O. Pickard-Cambridge 1874, *Corinnomma severum* (Thorell 1877), *Oedignatha scrobiculata* Thorell 1881, *Pranburia mahannopi* Deeleman-Reinhold 1993, *Cebrenninus rugosus* Simon 1887, *Bianor incitatus* Thorell 1890, *Hasarius adansoni* (Audouin 1826), *Hyllus diardi* (Walckenaer 1837), *Thiania bhamoensis* Thorell 1887, and *Thyene imperialis* (Rossi 1846). Further records are listed, and new records and descriptions from papers published recently on material collected in Laos are reported. The total number of Lao spider species amounts currently to 225 species. Beside true spiders, the second record of *Typopeltis magnificus* Haupt 2004 is recorded from Laos.

Key words — Taxonomy, biodiversity, Indochina, Oudomxai Province, Bolikhamsay Province

Introduction

In the past decade, spider specimens collected mainly by the first author in Laos from 2003 through 2011 are treated by specialists in various families. Huber (2011) revised the large genus *Pholcus* (see below). In the present series of publications mostly spiders from groups are described or identified from which recent revisions are available (e.g. by Deeleman-Reinhold 2001, Lin & Li 2009; the latter as one example of the numerous papers by Chinese colleagues). Some genera have been revised recently using material from Laos (Jäger 2011: *Dendrolycosa*; Jäger 2012d: *Ctenus*, *Amauropelma*; Jäger 2012b: *Argiope*; Jäger & Wunderlich 2012: *Otacilia*). Checklists of neighbouring countries suggest that the actual number of spider species from Laos should be much higher than the present number. This series of study is intended to offer continuous source of information for the identification of spiders from Laos and neighbouring areas.

For supporting and triggering the research in Laos a poster was designed and published in 2011 by Jäger & Praxaysombath. It depicts nine species with information on their biology or natural history. A general introduction stresses the importance of spiders as predators in all ecosystems. The text is in Lao and English language and aims at the general public especially in Laos and Thailand.

Beside true spiders (Araneae) other arachnid orders are

treated. In this context the second record of the whip scorpion species *Typopeltis magnificus* Haupt 2004 could be discovered in Khammouan Province, close to Thakek (L34; SMF 62647, Fig. 2).

Material and methods

Material was examined and is preserved in 70% ethanol. Epigynes and internal duct systems were partly treated with 96% lactic acid. Leg measurements are given as: total length (femur, patella, tibia, metatarsus, tarsus). All measurements are in millimetres. As in Sparassidae (Jäger 2005: 88), slit sense organs close to the epigyne are illustrated if present.

Deposition of material: If not stated otherwise material is deposited in the Senckenberg Research Institute, Frankfurt am Main, Germany (SMF) and can be traced in the collection database SeSam (online at <http://sesam.senckenberg.de>). Material was deposited also in: MHNG — Museum d'Histoire Naturelle, Geneva, Switzerland, ZMI — Zoological Museum, Isfahan, Iran.

Publications used for identification are cited in the text. Moreover the following revisions were used: Deeleman-Reinhold (2001), Harvey et al. (2007: *Nephila*), Kuntner (2005: *Herennia*, 2007: *Nephilengys*), Levi (1983: *Argiope*), Murphy & Murphy (2000: Araneae), Ono (2009: Araneae), Song et al. (1999: Araneae), Yin et al. (1997: Araneidae), Zhang et al. (2004: Pisauridae), Zhu (1998: Theridiidae),

Zhu et al. (2003: Tetragnathidae). If not stated otherwise material was determined by the authors. Material is sorted in the material lists by provinces and from North to South and from West to East.

Abbreviations used in the text: AME — anterior median eyes, ALE — anterior lateral eyes, AW — anterior width of dorsal shield of prosoma, d — dorsal, OL — length of opisthosoma, OW — width of opisthosoma, OS — opisthosoma, p — prolateral, PJ — subsequent number of Sparassidae examined by Peter Jäger, PME — posterior median eyes, PL — length of dorsal shield of prosoma, PLE — posterior lateral eyes, PS — prosoma, PW — width of dorsal shield of prosoma, r — retrolateral, v — ventral, I–IV — leg I–IV.

Localities (Fig. 1). Laotian localities where spiders were collected are listed here from North to South and from West to East in order of the particular provinces (grey numbers L1–103 in Jäger 2007, Jäger & Praxaysombath 2009, 2011b; black numbers L104–117 see below). L-numbers are referred to in the “material examined” section of each species. Names of villages, streams and cliffs are partly according to the geographical maps of the Laotian “Service Géographique d’Etat” (1: 100000).

Lao terms: Ban=village, Houay=stream, Keng=rapid, Nam=river, Pha=cliff, Phou=hill, Tham=cave, That/Tad=waterfall.

Oudomxai Province

- L104 Namor District, Tham Na Thong, N 20°52.3', E 101°47.0', 675 m altitude, cave, 31.I.2010, H. Steiner leg.
- L105 Namor District, Tham Mokfek, N 20°48.6', E 101°47.2', 830 m altitude, cave, 28.I.2010, H. Steiner leg.
- L106 La Distr., Tham Phatiao Singkam (F48–109–005), N 20°47.318', E 102°2.31', 750 m altitude, cave, 03.II.2010, H. Steiner leg., Northern Lao-European Cave Project 2010
- L107 Muang Xai, Phou Hippi provincial protected area, ca. 4 air km SSE Oudomxai, around N 20°39'42.73", E 102°0'13.66", 660–1000 m alt., ground, vegetation, under rock, by hand, by day and night, L. Nophaseud leg. 13.+18.IV.2011; Muang Xai, Ban Na Me, N 20°39.978', E 101°59.24', 660 m altitude, at day, L. Nophaseud & P. Sydanchanh leg. 24.X.2010.

Luang Prabang Province

- L108 Tham Pha Man, 6.7 km NE of Luang Prabang city, N 19°55.7', E 102°11.3', 280 m altitude, cave, 1.I.2004, H. Steiner leg.

One cave surveyed by Steiner is situated close to a previously listed locality (Jäger & Praxaysombath 2009) and will be subsumed under the existing L-numbers:

- L82 Phou Khoun District, Tham Muay, N 19°27.1', E 102°26.1', 1200 m altitude, cave 1 km NNW of Tham Seua, 4.I.2007, H. Steiner leg.

Houaphan Province

- L109 Vieng Thong, Owl Cave II (F48–123–004), N 20°31.083', E 103°24.133', 1100 m altitude, cave, 17.I.2009, H. Steiner leg., Northern Lao-European Cave Project 2009
- L110 Vieng Thong, Xop, Tham Long Puang (F48–123–001), N 20°28.428', E 103°21.74', 829 m altitude, cave, 16.I.2009, H. Steiner leg., Northern Lao-European Cave Project 2009; Vieng Thong, Tham Ho Neung (F48–123–009); N 20°27.925', E 103°20.983', 762 m altitude, cave, 19.I.2010, H. Steiner leg., Northern Lao-European Cave Project 2010
- L111 Vieng Thong, Tham Chao Houa Khao Khong (F48–123–013), N 20°27.2', E 103°23.773', 900 m altitude, cave, 20.I.2010, H. Steiner leg., Northern Lao-European Cave Project 2010
- Vieng Thong, Tham Mak Sak (F48–123–008), N 20°27.03', E 103°23.578', 830 m altitude, cave, 20.I.2010, H. Steiner leg., Northern Lao-European Cave Project 2010
- L112 Xam Neua, Tham Kouang Tai (F48–125–020), N 20°27.47', E 104°9.85', 850 m altitude, cave, 12.I.2008, H. Steiner leg., Northern Lao-European Cave Project 2008
- Xam Neua, Tham Nam (F48–125–008), N 20°27.25', E 104°10.078', 850 m altitude, cave, 14.I.2007, H. Steiner leg., French Khammouane Expedition
- L113 Tham Houay Long Kou (F48–125–026), N 20°23.678', E 104°13.438', 880 m altitude, cave, 13.I.2008, L. Price, 15.01.2008, H. Steiner leg., Northern Lao-European Cave Project 2008

Two caves surveyed by Steiner are situated close to previously listed localities (Jäger & Praxaysombath 2009, 2011b) and will be subsumed under the existing L-numbers:

- L65 Tham San Lek Hok (F48–125–036), N 20°28.06', E 104°10.708', 860 m altitude, cave 300 m W of Tham Pha Hin, 11.I.2008, H. Steiner leg., Northern Lao-European Cave Project 2008
- L80 Tham Long Mak (F48–135–011), N 20°16.923', E 103°22.407', 1180 m altitude, cave 180 m E of Tham Mue, 15.I.2009, H. Steiner leg., Northern Lao-European Cave Project 2008

Vientiane Province

- L114 Vientiane, Ban Dongmakkhay, Houay Nhang Conservation forest, N 18°5'1.90"N, E 102°40'16.71", 186 m alt., secondary forest, by day, by hand, P. Jäger leg. 01.IV.2011.

One additional locality in Vientiane is subsumed under an existing L-number (Jäger 2007):

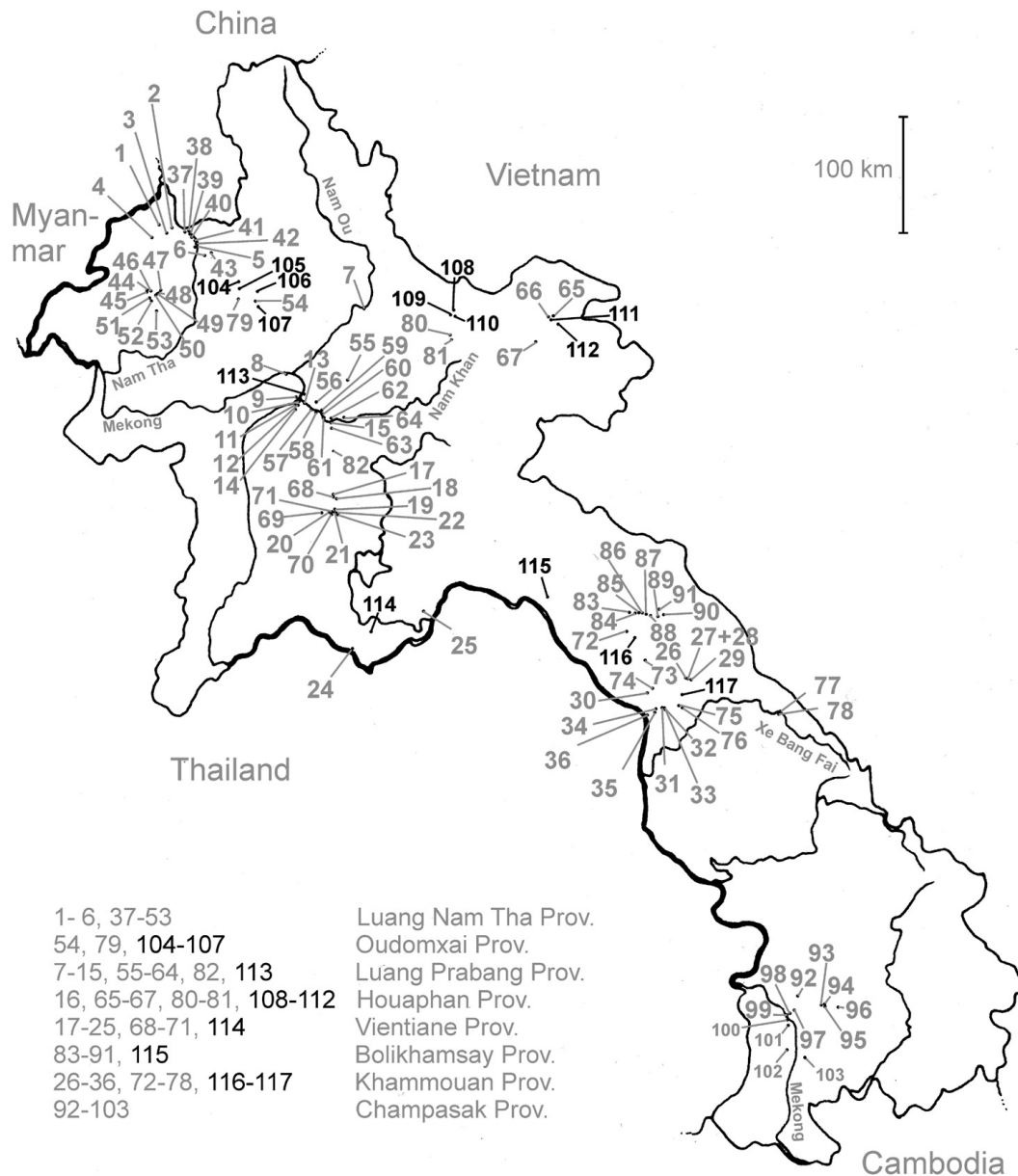


Fig. 1. Collecting sites in Laos (with main rivers). Black numbers (L 104–117) are referred to in the “Material and methods” paragraph, bright grey numbers (L1–103) in Jäger (2007) and Jäger & Praxaysombath (2009, 2011b). L16 (Muong You, material from MNHN) not mapped.

- L24 Sisattanak District, Sapanthong Neua, N 17°57' 25.9", E 102°37' 43.7", 169 m altitude, house and garden 2.5 km ESE from Vientiane city centre, mango tree, grass, ground, by hand, at night, L. Nophaseud leg. 26.III.2011.

Bolikhamsay Province

- L115 Nam Kading National Protected Area, Tad Vang Fong Training Centre, N 18°20.48', E 104°8.625', 150 m alt., sandy river side, vegetation, rocks, at day, by hand, P. Jäger & L. Nophaseud leg. 25.III.2011.

Khammouan Province

- L116 Phou Hinboun NPA, Tham Kong Lo, near northern entrance, N 17°57' 18.00", E 104°45' 47.00", 200 m altitude, secondary forest at base of limestone cliff, P. Schwendinger leg. 27.IX.2010, LT-10/21.
- L117 Nhommalath [=Gnommalat] District, near Ban Muangkhai [former Ban That], Tham Pra [N 17°31' 19.64", E 105°4' 3.91"], in cave, by hand, by day, H. Steiner leg., 2.III.2006.



Fig. 2. *Typopeltis magnificus* Haupt 2004 from Khammouan: L34, in cave (SMF 62647), male feeding on female.

Results

Hexathelidae Simon 1892

Macrothele bannaensis Xu & Yin 2001

Material examined. 1 male (SMF 62742), L43, valley with small stream, small patch of forest, sieving, P. Jäger & S. Bayer leg., 18.XI.2009, P. Schwendinger & P. Jäger det.

The species was described from Southern China, Yunnan Province, Xishuangbanna (Xu & Yin 2001) and recorded subsequently from Menglun town in the same province (Zha et al. 2012). It was found in Laos 130 km SE and 100 km SSE of the type locality respectively in more or less fragmented and disturbed habitats. Schwendinger (personal communication) recorded this species close to L43 (L6: 750–900 m altitude, secondary forest on steep slope, 16.IX.2010, leg. P. Schwendinger; “very common under objects lying on the forest floor”; several males and females, MHNG).

First record for Laos.

Ctenizidae Thorell 1887

Cyclocosmia siamensis Schwendinger 2005

Material examined. 2 females (SMF), Laos, without further data, National University of Laos 224, P. Schwendinger det. 2011.

According to Schwendinger (in litt.) this species occurs in Thailand close to Lao territory. Females were identified by dissected spermathecae.

First record for Laos.

Pholcidae C. L. Koch 1851

Huber (2011) published a revision on the genus *Pholcus* Walckenaer 1805 and closely related genera and included fifteen species from material collected in Laos, eleven of which were new to science:

Pholcus bidentatus Zhu, Zhang, Zhang & Chen 2005 (Houaphan: L80),

Pholcus bolikhamsai Huber 2011 (Bolikhamsay: L85; Fig. 15),

Pholcus elongatus (Yin & Wang 1981) (Luang Nam Tha: L2, L6; Luang Prabang: L8; Figs. 12–13),

Pholcus erawan Huber 2011 (Luang Prabang: L7),

Pholcus jaegeri Huber 2011 (Khammouan: L32, L34, L35),

Pholcus khene Huber 2011 (Champasak: L93, L95; Fig. 14),

Pholcus kimi Song & Zhu 1994 (Oudomxai: L54, L106, Houaphan: L66, L109, L110, L111, L113),

Pholcus laksao Huber 2011 (Bolikhamsay: L87, L88, tentatively assigned: L83; Figs. 10–11),

Pholcus namkhan Huber 2011 (Luang Prabang: L13, L15, L108),

Pholcus namou Huber 2011 (Luang Nam Tha: L44; Luang Prabang: L7, L82; Fig. 8),

Pholcus pakse Huber 2011 (Champasak: L100, L101, L102; Fig. 7),

Pholcus quinqueotatus Thorell 1878 (Luang Nam Tha: L1),

Pholcus steineri Huber 2011 (Oudomxai: L79, L104, L105),

Pholcus thakek Huber 2011 (Khammouan: L33, tentatively assigned: L26, L28, L29, L31, L32, L34; Fig. 9),

Pholcus bangfai Huber 2011 (Khammouan: L77).

Two additional species were recorded and identified by Huber:

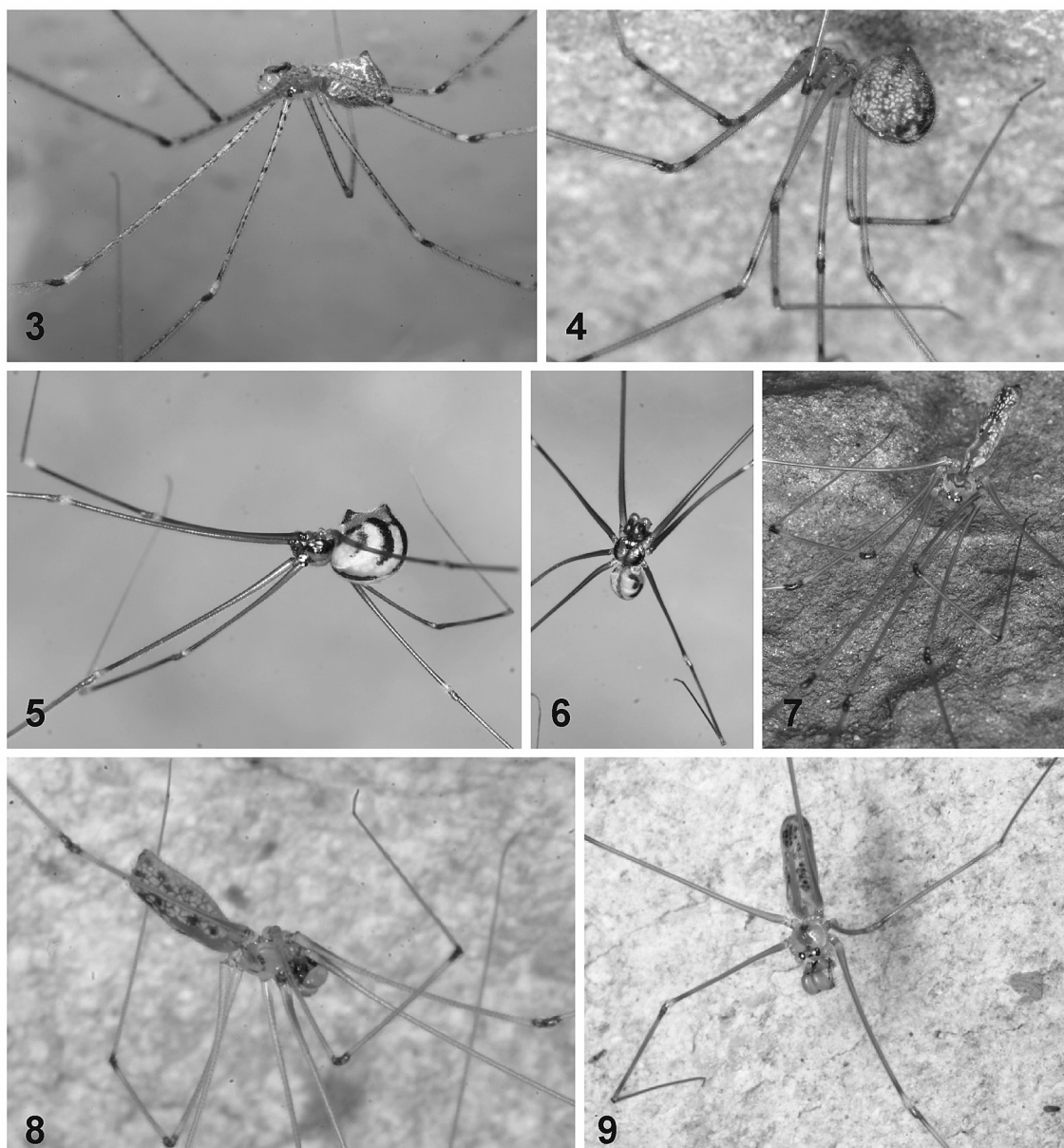
Micropholcus fauroti (Simon 1887) (Luang Prabang: L9; Vientiane: L24; Khammouan: L36),

Leptopholcus podophthalmus (Simon 1893) (Luang Nam Tha: L6; Luang Prabang: L10, L64).

The latter species was transferred from the genus *Pholcus* and is new to the Laotian spider fauna. The genus *Calapnita* Simon 1892 was recorded from Champasak Province (Muang Bachieng). Since exclusively females have been collected no specimen could be identified to species level (Huber 2011). Further unidentified material of *Khorata* Huber 2005 from Luang Nam Tha, Khammouan and Champasak is available in the Senckenberg collection.

Crossopriza lyoni (Blackwall 1867) (Fig. 3)

Material examined. 1 male (SMF 62008), L99, Pakse, airport, by hand, by day, P. Jäger leg., 29.XI.2009, B. Huber det. 2011. 1 female (SMF 62005), L13, by hand, by day, P. Jäger & J. Altmann leg., 4.III.2006, B. Huber det. 2011. 1 female (SMF 62004), L22, Vang Vieng, by hand, by night, P. Jäger & S. Bayer leg., 12.XI.2009, B. Huber det. 2011. 1 female, 7 juveniles (SMF 61963), L36, Thakek, houses, by



Figs. 3–9. Pholcidae. 3. *Crossopriza lyoni* (Blackwall 1867), male from Luang Phabang airport (L10); 4. *Physocyclus globosus* (Taczanowski 1874), female from Pak Ou cave (L8); 5–6. *Khorata khammouan* Huber 2005 from caves close to Thakek (L34), female (5) and male (6); 7. *Pholcus pakse* Huber 2011, female from Phou Malong (L101); 8. *Pholcus namou* Huber 2011, male from Tham Pathok cave (L7); 9. *Pholcus thakek* Huber 2011, male from caves close to Thakek (L31).

hand, by day, P. Jäger leg., 17.II.2003, B. Huber det. 2011.

Khorata cf. *jaegeri* Huber 2005

Material examined. 1 juvenile (SMF 61986), L26, Tham Deua, in cave, by hand, by day, P. Jäger leg., 21.II.2003, B. Huber det. 2011.

Khorata khammouan Huber 2005 (Figs. 5–6)

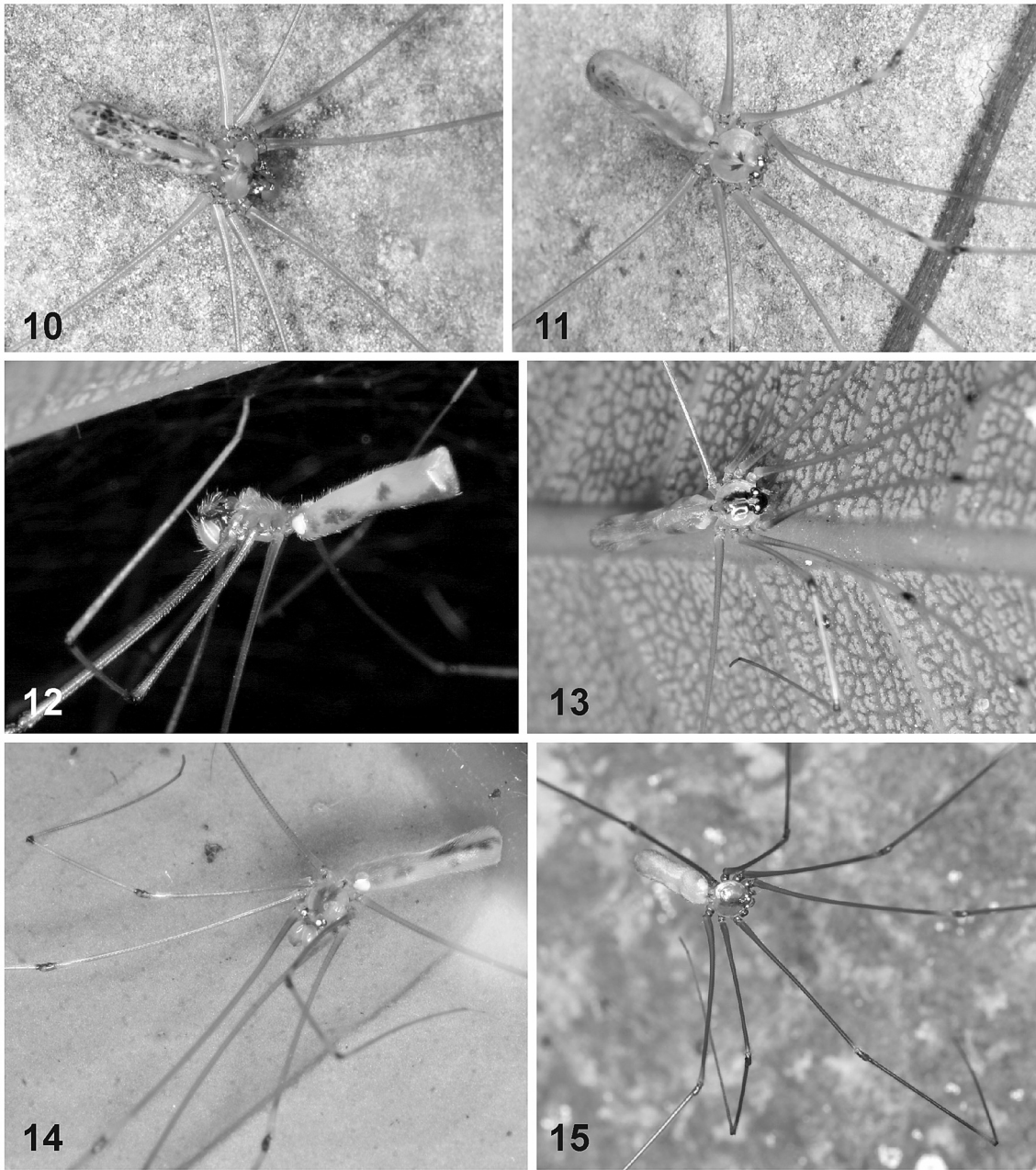
Material examined. 1 female (SMF 62001), L117, Nhommalath District, near Ban Muangkhai [former Ban That], Tham Pra [N 17°31' 19.64", E 105°4' 3.91"], in cave, by hand, by day, H. Steiner leg., 2.III.2006.

This species seems to have a relatively wide distribution

in Khammouan Province (Thakek to Nhommalath) in contrast to *K. jaegeri*, which latter is known only from Tham Deua. Both species can be distinguished by the colour pattern: *K. khammouan* shows a distinct black pattern especially on its opisthosoma (Figs. 5–6), whereas in *K. jaegeri* a pattern is missing.

Micropholcus fauroti (Simon 1887)

Material examined. 1 male, 1 female (SMF 62002), L36, Thakek, houses, by hand, by day, P. Jäger leg., 17.II.2003, B. Huber det. 2011. 4 females (SMF 61988), L36, Thakek, houses, by hand, by day, P. Jäger & V. Vedel leg., 18.X.2004, B. Huber det. 2011. 1 female (SMF



Figs. 10–15. Pholcidae. 10–11. *Pholcus laksao* Huber 2011 from Tham Mankon cave (L85), male (10) and female (11); 12–13. *Pholcus elongatus* (Yin & Wang 1981) from secondary forest, Pak Ou (L8), male (12) and female (13); 14. *Pholcus khene* Huber 2011, male from secondary forest, That Itou (L93); 15. *Pholcus bolikhamsey* Huber 2011, female from Tham Mankon cave (L85).

61987), L9, Luang Prabang, Tham Sieng Mang, in cave, by hand, by day, P. Jäger & V. Vedel leg., 12.XI.2004, B. Huber det. 2011. **1 male** (SMF 61933), L24, Vientiane, by hand, by day, P. Jäger leg., 30.XI.2009, B. Huber det. 2011.

Physocyclus globosus (Taczanowski 1874) (Fig. 4)

Material examined. **3 juveniles** (SMF 61989), L22, Vang Vieng, houses, by hand, by day, P. Jäger leg., 15.III.2008, B. Huber det. 2011. **1 female, 3 juveniles** (SMF 61926), L7, Nong Khiao, houses, by hand, by day, P. Jäger & F. Steinmetz leg., 16.–17.III.2007, B. Huber det.

2011.

Smeringopus pallidus (Blackwall 1858)

Material examined. **1 female** (SMF 62003), L36, Thakek, houses, by hand, by day, P. Jäger leg., 17.II.2003, B. Huber det. 2011. **1 female** (SMF 61962), L7, Nong Khiao, houses, by hand, by day, J. Altmann leg., 11.III.2006, B. Huber det. 2011. **3 juveniles** (SMF 61927), L15, Ban Keng Koung, toilet, by hand, by day, P. Jäger leg., 8.III.2006, B. Huber det. 2011.

Tetrablemmidae O. Pickard-Cambridge 1873

The family was firstly recorded by Lin et al. (2012). From material collected at the Nam Khan (L15) the authors described a new species: *Tetrablemma namkhan* Lin, Li & Jäger 2012.

Theridiidae Sundevall 1833

Parasteatoda celsabdomina (Zhu 1998)

Material examined. 1 male (SMF 62212), L115, Nam Kading NPA, by hand, by day, 24.III.2011.

Rhomphaea labiata (Zhu & Song 1991)

Material examined. 1 male (SMF 62222), L107, Phou Hippi, by hand, by night, 18.IV.2011.

Stemmops forcipis Zhu 1998

Material examined. 1 male (MHNG), L94, by day, sieving, P. Schwendinger leg. 2.X.2010. 1 female (MHNG), L95, by day, sieving, P. Schwendinger leg. 2.X.2010, LT-10/25.

The specimens were collected by sieving leaf litter as mentioned for all other specimens listed in Jäger & Praxaysombath (2011b).

Stemmops nigrabdomenus Zhu 1998

Material examined. 1 male (MHNG), L82, primary forest, 1180 m altitude, P. Schwendinger leg. 10.IX.2010, LT-10/06.

The specimen represents the second male for entire Laos. Jäger & Praxaysombath (2011b) published the first record.

Steatoda cingulata (Thorell 1890)

Material examined. 1 female (SMF 62228), L107, Phou Hippi, by hand, by day, 18.IV.2011.

Theridiosomatidae Simon 1881

Wunderlich (2011) described a new genus including a new subfamily (Luangnaminae) as well as three new species from Laotian caves: *Luangnam discobulbus* Wunderlich 2011 from Luang Nam Tha Province (Vieng Phou Kha, Tham Pasat, L44), *Chthonopes cavernicolous* Wunderlich 2011 from Khammouan Province (Tham Boumlou, L73) and *Chthonopes jaegeri* Wunderlich 2011 from Bolikhamxay Province (Tham Mankon, L85; Fig. 16).

Symphytognathidae Hickman 1931

Patu shiluensis Lin & Li 2009

Material examined. 1 female (MHNG), Xaisomboun Province, Phou Khao Khouay NPA, N of Ban Hadkai, trail to Tad Xay, N 18°27' 5.00", E 103°8' 59.00", 300 m altitude, secondary forest, P. Schwendinger leg. 22.IX.2010, LT-10/15. 2 males, 1 female (SMF 61468), L95, vegetation,



Fig. 16. *Chthonopes jaegeri* Wunderlich 2011, female from Tham Mankon cave (L85). The spider sits in the hub, recognisable are radial threads (white arrow) and sticky spiral threads (black arrow).

leaf litter, sieving, P. Schwendinger leg. 02.X.2010, LT-10/27. 14 males, 8 females, 2 juveniles (MHNG), with same data as preceding specimens.

Jäger & Praxaysombath (2011b) listed the first record for Laos by means of a single female. The present series from exactly the same locality consists of several males and females. Males can be readily identified with illustrations of Lin & Li (2009). The single female represent the first record for Xaisomboun.

Anapidae Simon 1895

Pseudanapis parocula (Simon 1899)

Material examined. 1 female (MHNG), L15, disturbed forest, valley, waterfall, dry stream bed, sieving and WINKLER. P. Jäger leg. 21.–23.II.2008; Snazell det. 2012.

According to Snazell (in litt.) “the commonest anapid in SE Asia”. He suspects that “*P. parocula* may, in fact, represent a species group”. However, copulatory organs of the present female confirm with those illustrated by Platnick & Shadab (1979) and Brignoli (1981). Especially the broad incision of the posterior epigynal margin and the small oval to kidney-shaped spermathecae seem to be diagnostic.

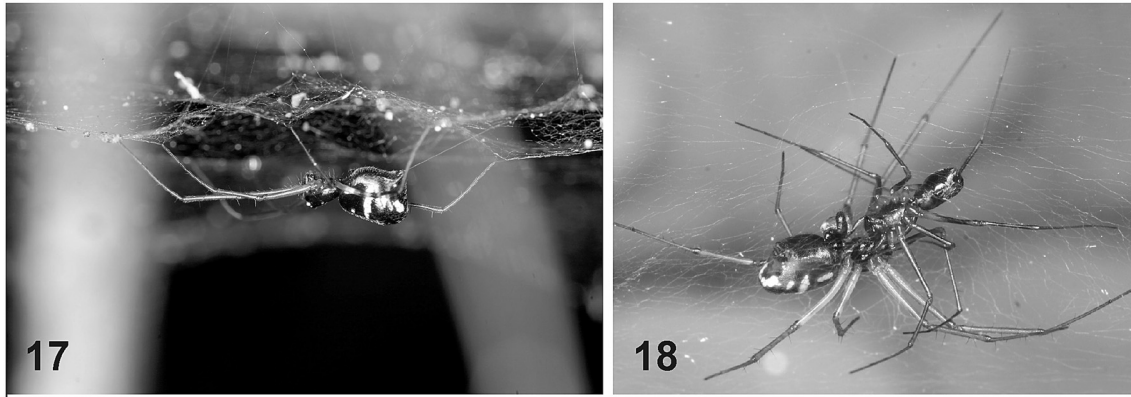
First record for Laos.

Linyphiidae Blackwall 1859

Neriere macella (Thorell 1898) (Figs. 17–18)

Material examined. 1 male, 1 female, 1 juvenile (SMF 62236), L107, Phou Hippi, 730 m, 18.IV.2011. 2 females (SMF 62217), L107, Phou Hippi, by hand, by day, 18.IV.2011. 1 male, 5 females (SMF 62202), L115, Nam Kading NPA, by hand, by day, 24.III.2011.

Specimens were identified using illustrations of palp,



Figs. 17–18. *Neriene macella* Thorell 1895. 17. Female from Tham None (L19); 18. Female and male in copula from Ban Phoxay (L18).

epigyne and vulva by Helsdingen (1969). Diagnostic for females seems to be the shape of the glandular appendages of the internal duct system: in contrast to the related species *N. beccarii* (Thorell 1890) and *N. sundaica* (Simon 1905) they are parallel directed in a longitudinal axis (transversal in *N. beccarii*, slightly converging anteriorly in *N. sundaica*).

First record for Laos.

Tetragnathidae Menge 1866

Guizygiella guangxiensis (Zhu & Zhang 1993)

Material examined. **1 female** (MHNG), L24, Sapanthong Neua, by hand, at night, 1.4.2011. **1 male, 9 females** (ZMI), L115, Tad Vang Fong, by hand, at day. P. Jäger & L. Nophaseud leg. 25.III.2011. **3 males, 2 females** (SMF 62204), L115, Tad Vang Fong, by hand, by night, 25.III.2011. **2 males, 1 female** (SMF 62203), L115, Tad Vang Fong, by hand, by night, 23.III.2011.

Guizygiella nadleri (Heimer 1984)

Material examined. **2 females** (ZMI), L24, Sapanthong Neua, by hand, at night, L. Nophaseud leg. 1.IV.2011.

Leucauge celebesiana (Walckenaer 1842)

Material examined. **1 male** (MHNG), Oudomxai Province, trail to Tad Nam Kad, E Oudomxai, N 20°41' 45.00", E 102°6' 45.00", 900 m altitude, primary forest, P. Schwendinger leg. 19.IX.2010.

Orsinome vethi (Hasselt 1882)

Material examined. **1 male, 2 females** (SMF 62231), L107, Phou Hippi, by day, by hand, 18.IV.2011. **3 females** (SMF 62201), L115, Tad Vang Fong, by hand, by night, 24.III.2011.

Tetragnatha geniculata Karsch 1891

Material examined. **1 female** (SMF 62208), L115, Tad Vang Fong, by hand, by night, 25.III.2011.

Tetragnatha hasselti Thorell 1890

Material examined. **1 female** (SMF 62206), L24, Sapanthong Neua, by hand, by night, 1.VI.2011.

First record for Laos.

Tetragnatha mandibulata Walckenaer 1842

Material examined. **1 male** (SMF 62209), L115, Tad Vang Fong, by hand, by night, 18.III.2011. **7 males, 7 females** (SMF 62207), L107, Ban Na Me, by hand, by day, 24.X.2010.

Tetragnatha maxillosa Thorell 1895

Material examined. **1 male, 3 females** (SMF 62226), L107, Phou Hippi, by hand, by day, 13.IV.2011. **1 female** (SMF 62205), L115, Tad Vang Fong, by hand, by night, 25.III.2011.

Nephilidae Simon 1894

Herennia multipuncta (Doleschall 1859)

Material examined. **1 male, 1 female, 3 juveniles** (ZMI), L115, Tad Vang Fong Training Centre, at night, 25.III.2011. **1 male** (SMF 62211), L115, Tad Vang Fong, by hand, by night, 23.III.2011.

Nephila pilipes (Fabricius 1793)

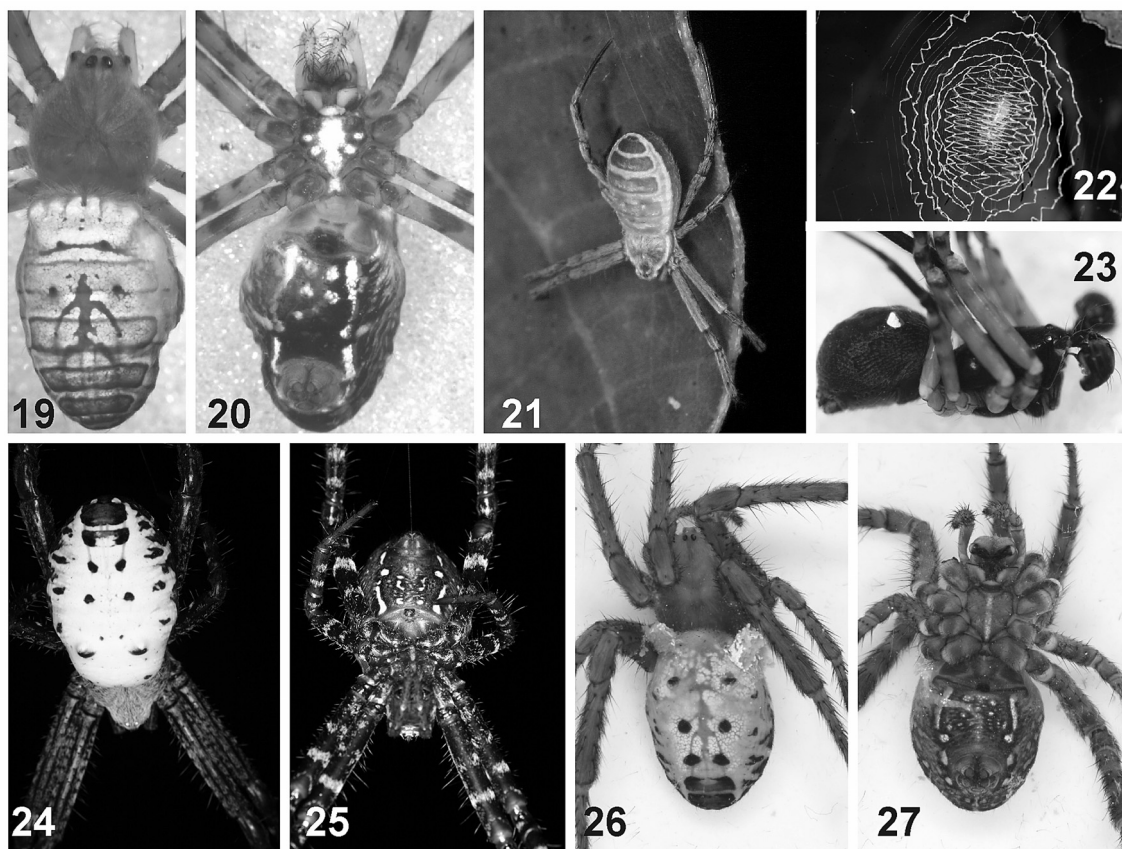
Material examined. **1 juvenile** (SMF 62225), L107, Phou Hippi, by hand, by day, 13.IV.2011.

Nephilengys malabarensis (Walckenaer 1842)

Material examined. **1 female** (SMF 62242), L107, Phou Hippi, by day, by hand, 18.IV.2011

Araneidae Clerck 1757

Jäger (2012b) described one species of the genus *Argiope* Audouin 1826 from Laos: *A. hinderlichi* Jäger 2012 (Luang Prabang: L7; Bolikhamsay: L88), and recorded two species new for Laos: *A. chloreis* Thorell 1877 (Champasak, L103; Figs. 19–22 and *A. jinghongensis* Yin, Peng & Wang 1994 (Bolikhamsay: L88; Khammouan: L34; Champasak: L92).



Figs. 19–27. Araneidae. 19–22. *Argiope chloreis* Thorell 1877, female from Champasak (L103) (19–20: in ethanol, 21–22: alive in original habitat); 23–27. *Cyrtophora cylindroides* (Walckenaer 1841), male (23) and female (24–27) from Thailand, Ko Chang (23, 26–27: in ethanol, 24–25: alive in original habitat).

Acusilas malaccensis Murphy & Murphy 1983

Material examined. 2 females (SMF 62237), L107, Phou Hippi, by day, 18.IV.2011.

Argiope aemula (Walckenaer 1842)

Material examined. 1 female (SMF 62220), L107, Phou Hippi, by hand, by day, 13.IV.2011.

Argiope dang Jäger & Praxaysombath 2009

Material examined. 2 females (SMF 62223), L107, Phou Hippi, by hand, by night, 18.IV.2011.

The record represents the third locality in Laos and the first record for Oudomxai Province.

Argiope pulchella Thorell 1881

Material examined. 1 female (SMF 60315), L96, Pak Song, pine tree plantation, at day, sweep net, P. Jäger & S. Bayer leg. 27.XI.2009. 1 female (ZMI), Laos, Oudomxai Province, Phou Hippi provincial protected area, ca. 5.75 air km S Oudomxai, N 20°40' 4.32", E 102°02' 25.32", 111,69 m alt., ground, vegetation, tree bark, by hand, by night, L. Nophaseud leg. 18.4.2011.

Caerostris sumatrana Strand 1915

Material examined. 1 female (SMF 62230), L107, Phou

Hippi, by day, by hand, 18.IV.2011.

Cyrtophora cylindroides (Walckenaer 1841) (Figs. 23–35)

Material examined. 1 male, 2 females, 4 emboli: THAILAND. Trat Province, Ko Chang, 3 km S of Hat Sai Kao, N 12°04' 46.2", E 102°16' 48.2", 37 m altitude, secondary forest, partly empty river bed, by hand, by night, P. Jäger & S. Bayer leg. 02.XI.2009.

Description. Male. PL 1.6, PW 1.25, AW 0.6, OL 1.5, OW 1.1.

Female 1. PL 6.7, PW 5.1, AW 2.6, OL 9.3, OW 7.0. Female 2 PL 7.3, PW 6.1, AW 3.0, OL 12.3, OW 8.5.

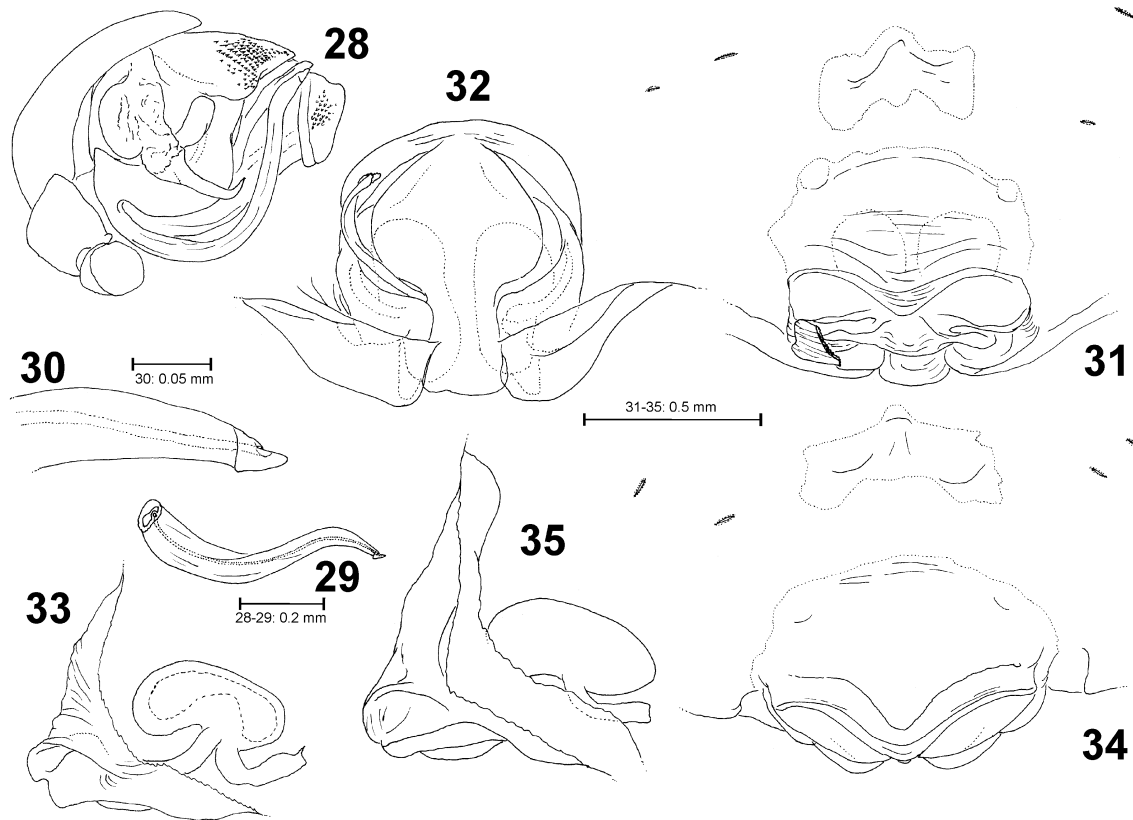
Note. Specimens were readily identified using illustrations in Tanikawa et al. (2010). There is evidence from a photo taken by Didier Goetzinger (Vientiane) in Nam Theun area, Khammouan Province that this species also occurs in Laos (Goetzinger 2011: 48). A female and a male from Thailand are illustrated (Figs. 23–35).

Cyrtophora unicolor (Doleschall 1857)

Material examined. 1 female (SMF 62214), L114, Ban Don Ma Khai, by hand, by night, 1.IV.2011.

Larinia phthisica (L. Koch 1871)

Material examined. 1 male, 1 female, 1 juvenile (SMF



Figs. 28–35. *Cyrtophora cylindroides* (Walckenaer 1841), male (28–30) and female (31–35) from Thailand, Ko Chang. 28. Palp, prolateral; 29. Broken embolus from epigyne; 30. Detail of broken embolus tip; 31–35. Epigyne, ventral (31, 34), posterior (32), and lateral (33, 35).

62239), L107, by night, 18.IV.2011.
First record for Laos.

Pisauridae Simon 1890

Jäger (2011) described two species of *Dendrolycosa*: *D. bairdi* Jäger 2011 and *D. duckitti* Jäger 2011 (both from Champasak: L95; additionally, *D. duckitti* was recorded from Oudomxai: L107) and recorded *D. robusta* (Thorell 1895) from Laos for the first time (Vientiane: L114). The following species occurring in Laos were transferred from *Eurychoera* and *Thalassius* respectively: *Sphedanus banna* (Zhang, Zhu & Song 2004) and *Nilus paralbocinctus* (Zhang, Zhu & Song 2004) (Jäger 2011).

Dolomedes mizhoanus Kishida 1936

Material examined. 2 females, 2 juveniles (SMF 62240), L107, Phou Hippi, by day, 18.IV.2011.

Hygropoda campanulata Zhang, Zhu & Song 2004

Material examined. 1 female (SMF 62219), L107, Phou Hippi, by hand, by night, 18.IV.2011.

First record for Laos.

Polyboea zonaformis Wang 1993

Material examined. 1 male (MHNG), L 115, Nam

Kading NPA, ca. 1 km NE of Na Hin, Tad Mouang, N 18° 13' 13.00", E 104° 32' 8.00", 270 m altitude, disturbed primary forest, P. Schwendinger leg. 26.IX.2010 LT 10/18.

Sphedanus banna (Zhang, Zhu & Song 2004)

Material examined. 1 juvenile (SMF 62232), L107, Phou Hippi, by day, by hand, 18.IV.2011. 1 subadult female (SMF 62218), L107, Phou Hippi, by hand, by night, 18.IV.2011.

Oxyopidae Thorell 1870

Deeleman-Reinhold (2009) transferred one species recorded previously from Laos from the genus *Hamataliwa*: *Hamadruas sikkimensis* (Tikader 1970).

Psechridae Simon 1890

This family was thoroughly revised by Bayer (2011, 2012) for its entire distribution range in South and Southeast Asia. He recorded four species for the first time from Laos, two of them new to science: *Fecenia cylindrata* Thorell 1895 (Luang Prabang: L9, L10, L15; Champasak: L92, L95, L98, L100, L101, L103), *Psechrus ghecuanus* Thorell 1897 (Luang Nam Tha: L2, L51), *Psechrus jaegeri* Bayer 2012 (Champasak: L92, L93, L95, L103), *Psechrus laos* Bayer

2012) (Bolikhamsay: L83, L85, L88). Further he listed additional records for *Psechrus ancoralis* Bayer & Jäger 2010 (Luang Nam Tha: L37, L38, L39, L40, L44, L48; Oudomxai: L104; Luang Prabang: L7, L82; Houaphan: L80), *Psechrus antraeus* Bayer & Jäger 2010 (Vientiane: L20, L69), *Psechrus khammouan* Jäger 2007 (Khammouan: L28, L31, L34), *Psechrus luangprabang* Jäger 2007 (Luang Nam Tha: L39, L40, L41, L43; Oudomxai: L107; Luang Prabang: L7, L10, L13, L15, L59, L64; Vientiane: L18, L114; Bolikhamsay: L83, L86, L91, L115) and *Psechrus steineri* Bayer & Jäger 2010 (Khammouan: L77).

Fecenia cylindrata Thorell 1895

Material examined. 1 juvenile (SMF 62571), L86, Houay Khiao, by day, by hand, P. Jäger & J. Martens leg., 4.III.2010, S. Bayer det. 1 juvenile (SMF 62572), L86, with same data as for preceding specimen.

From the distribution ranges of *F. cylindrata* and *F. protensa* the juvenile specimens belong most likely to *F. cylindrata* (Bayer, personal communication).

Ctenidae Keyeserling 1877

Representatives of this family have been included for the first time in a revision. Jäger (2012d) described three new species of the genus *Ctenus* Walckenaer 1805: *C. theodorianum* Jäger 2012 (Oudomxai: L107), *C. holthoffi* Jäger 2012 (Champasak: L95), *C. bayeri* Jäger 2012 (Champasak: L96), and recorded *C. simplex* Thorell 1897 (Luang Prabang: L7, L10; Vientiane: L21) for the first time from Laos. Moreover, he recorded the genus *Amauropelma* Raven, Stumkat & Gray 2011 for the first time from Laos and India and described three new species: *A. hoffmanni* Jäger 2012 (Luang Nam Tha: L37, L43), *A. jagelkii* Jäger 2012 (Luang Prabang: L7), *A. annegretae* Jäger 2012 (Luang Prabang: L15, L58, L60).

Agelenidae C. L. Koch 1837

Agelena limbata Thorell 1897

Material examined. 1 female, 2 subadult females (SMF 62229), L107, Phou Hippi, by hand, by day, 18.IV.2011. 2 females (SMF 62227), L107, Phou Hippi, by hand, by day, 13.IV.2011.

Titanoecidae Lehtinen 1967

Amuvinda escheri (Reimoser 1934)

Material examined. 1 male, 8 females, 2 juveniles (SMF 62210), L115, Tad Vang Fong, by hand, by day, 25.III.2011.

Clubionidae Wagner 1887

Jäger & Dankittipakul (2010) described six new species from Laos: *Clubiona kai* Jäger & Dankittipakul 2010

(Luang Prabang: L15), *C. lala* Jäger & Dankittipakul 2010 (Luang Nam Tha: L41), *C. kuu* Jäger & Dankittipakul 2010 (Luang Prabang: L7, L15), *C. vukomi* Jäger & Dankittipakul 2010, *Malamatidia zu* Jäger & Dankittipakul 2010 (Luang Prabang: L15) and *M. christae* Jäger & Dankittipakul 2010 (Luang Nam Tha: L44). Additionally they recorded *Cheiracanthium insulanum* (Thorell 1878) (Luang Nam Tha: L5; Champasak: L98), *Ch. unicum* Bösenberg and Strand 1906 (Oudomxai: L54), *Clubiona abnormis* Dankittipakul 2008 (Champasak: L95), *C. filicata* O. Pickard-Cambridge 1874 (Vientiane: L18), and *C. melanothele* Thorell 1895 (Bolikhamsay: L90) for the first time from Laos.

Clubiona filicata O. Pickard-Cambridge 1874

Material examined. 1 male, 1 juvenile (SMF 62235), L107, Phou Hippi, by hand, by night, 18.IV.2011. 1 male (SMF 62216), L107, Phou Hippi, by hand, by day, 18.IV.2011. 1 male (SMF 62213), L24, Sapanthong Neua, by hand, by night, 26.III.2011.

Cheiracanthium insigne O. Pickard-Cambridge 1874

Material examined. 1 male (SMF 62233), L107, Phou Hippi, by night, by hand, 18.IV.2011.

First record for Laos.

Corinnidae Karsch 1880

Jäger & Wunderlich (2012) described five new species of the genus *Otacilia* Thorell 1897: *O. bicolor* Jäger & Wunderlich 2012 (Champasak: L95), *O. namkhan* Jäger & Wunderlich 2012 (Luang Prabang: L15; Figs. 36–37), *O. loriot* Jäger & Wunderlich 2012 (Luang Prabang: L60), *O. vangvieng* Jäger & Wunderlich 2012 (Vientiane: L20), and *O. christae* Jäger & Wunderlich 2012 (Luang Prabang: L15).

Corinnomma severum (Thorell 1877)

Material examined. 1 female (SMF 62238), L107, Phou Hippi, by night, 18.IV.2011.

First record for Laos.

Oedignatha scrobiculata Thorell 1881

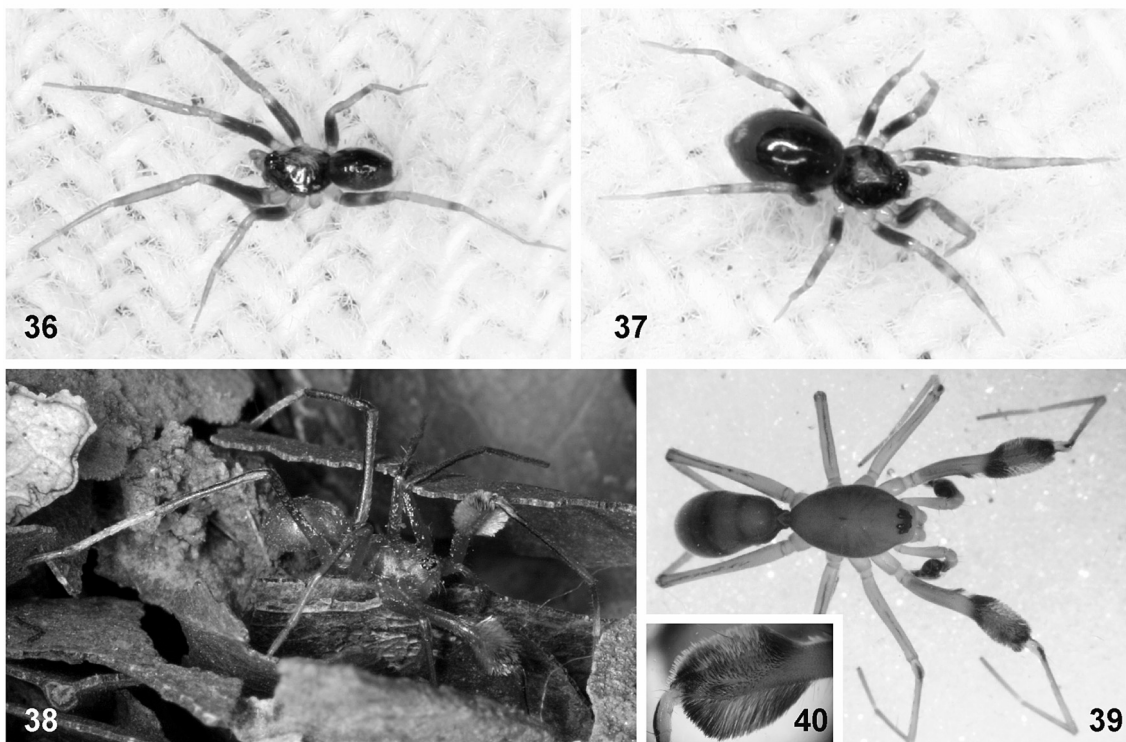
Material examined. 2 females (SMF 62224), L107, Phou Hippi, by hand, by night, 18.IV.2011.

First record for Laos.

Pranburia mahannopi Deeleman-Reinhold 1993 (Figs. 38–40)

Material examined. 1 male, 1 juvenile (MHNG), L116, Khammouan Province, Phou Hinboun NPA, Tham Kong Lo, near northern entrance, N 17°57' 18.00", E 104°45' 47.00", 200 m altitude, secondary forest at base of limestone cliff, P. Schwendinger leg. 27.IX.2010, LT-10/21.

The single male was reared by Peter Schwendinger to adulthood. The embolus shows exactly the subdistal tooth



Figs. 36–40. Corinnidae. 36–37. *Otacilia namkhan* Jäger & Wunderlich 2012 from Ban Keng Koung (L15), male (36) and female (37), both alive; 38–40. *Pranburia mahannopi* Deeleman-Reinhold 1993 from Khammouan, live immature from Thakek, L34 (38), preserved male from Phou Hinboun NPA, L116 (39), and detail of brush of setae on femur I (40).

and shape of its distal part as shown in Deeleman-Reinhold (1993). The prosoma is a bit shorter (2.7) than that of the holotype (2.9). The colouration is brightly reddish brown (Fig. 39) and the setal brushes at the first femur are more restricted (Fig. 40), i.e. not extending proximally along the entire femur as shown in Deeleman-Reinhold (1993, 2001). Immatures found previously (L34) are most likely also belonging to this species (Fig. 38).

First record for Laos.

***Serendib muadai* spec. nov.** (Figs. 41–60)

Type material. **Holotype male** (SMF), Laos, Bolikhamxai Prov., Nam Kading National Protected Area, Tad Vang Fong Training Centre (L115), N 18°20' 28.8", E 104°8' 37.5", 150 m altitude, sandy riverside, rocks, vegetation, by day, by hand, P. Jäger & L. Nophaseud leg. 25.III.2011. **Paratypes:** 2 females (SMF), with same data as for holotype.

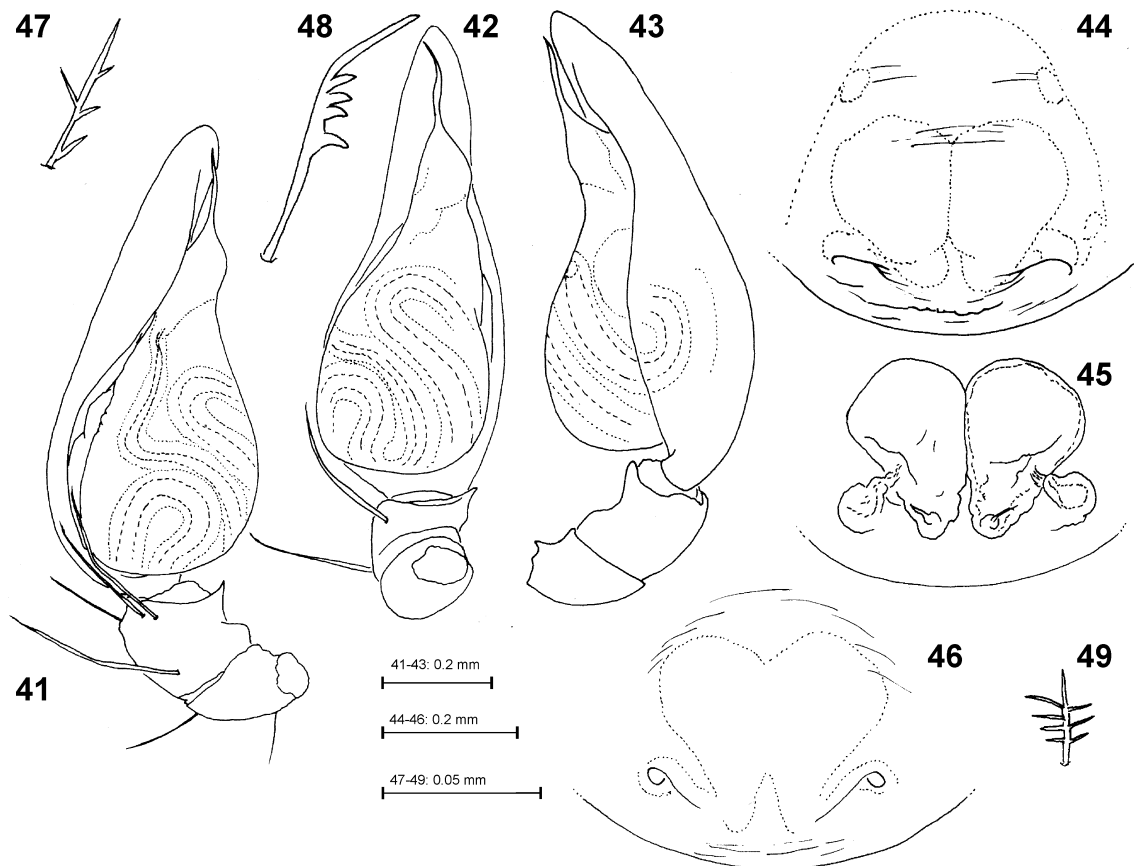
Etymology. The specific epitheton is a Lao word meaning “when?” referring to the question “When will the humans start to stop the human overpopulation on the planet Earth?”; noun in apposition.

Diagnosis. Small Castianeirinae species (3.8–4.3 mm body length). Similar to *Serendib volans* Deeleman-Reinhold 2001 (figs. 505–511) according to general arrangement of copulatory organs, colouration and habitus (Figs. 41–46, 50–60), but in general smaller and dorsal

opisthosoma with two transversal bright patches in the middle (Figs. 50, 55). Males of the new species having tip of embolus narrower and slightly longer and the prolateral basal loop of the sperm duct opened proximally (Figs. 41–43; *S. volans* with shorter and broader embolus tip and prolateral basal loop of sperm duct openend in retrolateral direction). Female copulatory organs are distinguished from *S. volans* by the lack of additional posterior loops and the size and shape of the spermathecae (Figs. 44–46). Moreover, spermathecae of the new species touching each other along the median line (separated in *S. volans*).

Description. **Male.** PL 1.6, PW 1.15, AW 0.63, OL 2.2, OW 1.20. Eye measurements: AME 0.11, ALE 0.07, PME 0.07, PLE 0.09, AME-AME 0.075, AME-ALE 0.02, PME-PME 0.19, PME-PLE 0.115, AME-PME 0.10, ALE-PLE 0.13, AER width 0.45, PER width 0.68, clypeus AME 0.18, clypeus ALE 0.20. Leg and palp measurements: Palp 1.89 (0.46, 0.23, 0.25, –, 0.95), I 4.13 (1.16, 0.37, 1.04, 0.87, 0.69), II: 3.89 (1.15, 0.38, 0.95, 0.80, 0.61), III 3.64 (1.05, 0.36, 0.85, 0.82, 0.53), IV 4.81 (1.46, 0.41, 1.21, 1.16, 0.67). leg formula 4123. Spination: femur I p 0–1, d 1–1; II d 1–1; III d 0–1–1; IV d 1–1–1; patella spineless; tibia I–II v 2–2–2; III p 1–1, r 1–1, v 1–2; IV p 1–1, r 1–1, v 0–1; metatarsus I v 1–2; II v 2–2; III p 1–1, r 1–0, v 2–2; IV p 1–1, r 1–0, v 2–1. Chelicerae with 2 promarginal and 2 retromarginal teeth.

Palp as in diagnosis. Embolus arising in 12-o’clock-position, running straightly distad, with tip distinctly narrowed



Figs. 41–49. *Serendib muadai* spec. nov. from Nam Kading (L115), male holotype (41–43) and female paratypes (44–49). 41–43. Left male palp, prolateral (41), ventral (42), and retrolateral (43); 44, 46. Epigyne, ventral (46: not dissected); 45. Vulva, dorsal; 47. Hair from dorsal opisthosoma; 48. Hair from frontal chelicerae; 49. Hair from dorsal femur IV.

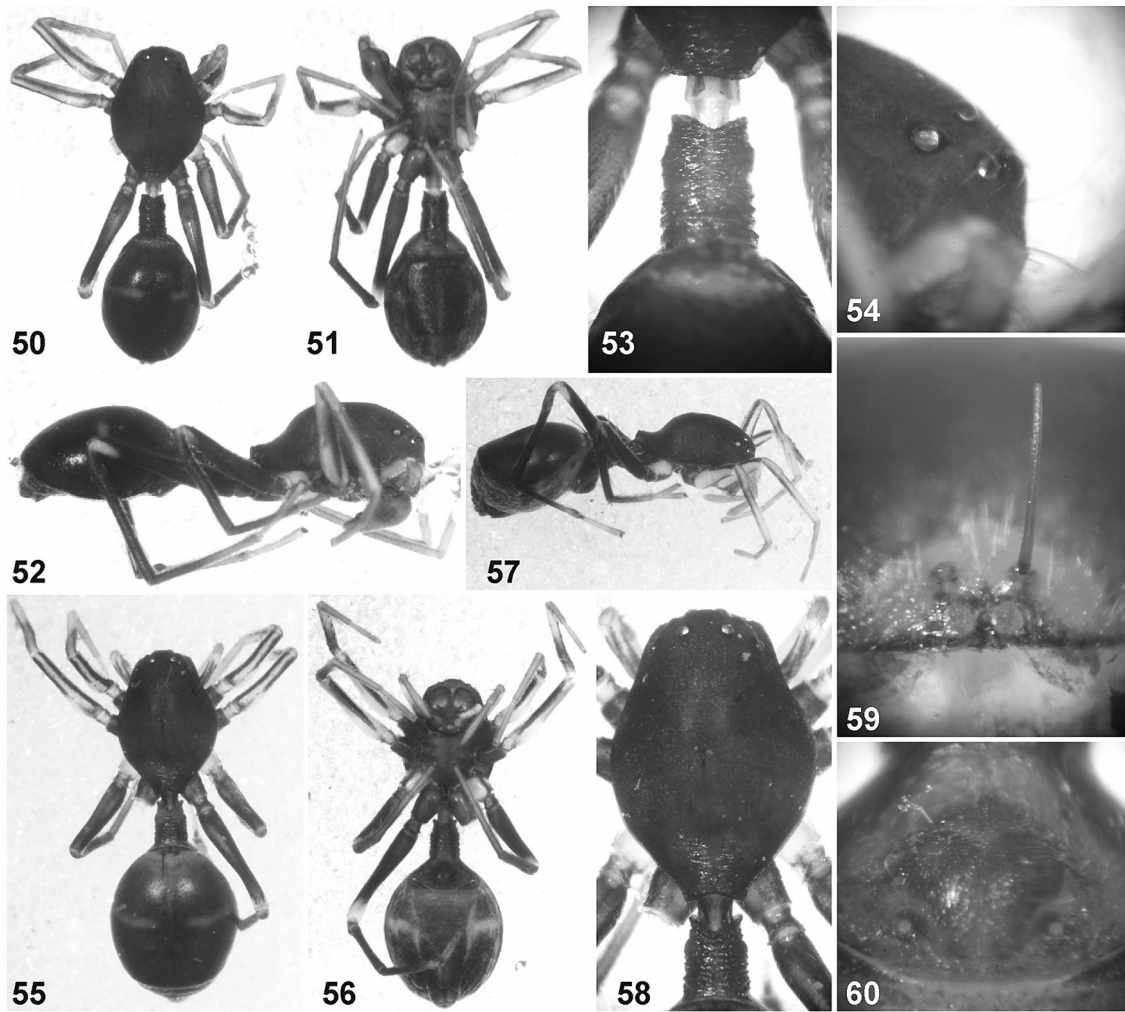
(Fig. 42). Subtegulum visible in prolateral view (Fig. 41). Sperm-duct with 2 loops and one s-shaped part between loops. Pedipalpal tibia with retrolateral tapered apex, visible in prolateral and ventral view (Figs. 41–42).

Colour and granulation (in ethanol) (Figs. 50–54). Dorsal shield of PS deep reddish brown, with dense and distinct fine granulations; fovea short, longitudinal, centrally situated; with dark patch in front of fovea and indistinct marble like pattern; posterior PS with wrinkled collar. Sternum dark yellowish brown, with seven radial markings. Labium with white distal lip, gnathocoxae with basal oval bright patch and inner margin pale. Chelicerae with same colour as dorsal shield. Femora of palp and leg I–II with alternating longitudinal dark and bright bands, distal segments yellowish brown in I–II with tarsus slightly brighter; legs III–IV darker, femora with white distal patch and few feathered setae dorsally; distal segments brighter; coxa III pale bright, others dark. Dorsal OS deep reddish brown, with pair of bright transversal patches in the middle and one median bright patch anteriorly, within these patches with very few white feathered setae. Dorsal scutum covering entire OS. Narrow front part with distinct transversal bulges and ridges (Fig. 53). Round part of OS anteriorly with 2 distinct spines (lost in this specimen). Ventral OS with same colour,

in front of epigastric furrow slightly brighter (orange brown) with transversal bright oval patch at epiandrium. Ventral scutum almost rectangular, followed by small scutum in front of spinnerets. Lateral parts with soft wrinkled cuticle and one pair of bright patches in the middle.

Female. PL 1.8, PW 1.27, AW 0.73, OL 2.5, OW 1.61. Eye measurements: AME 0.11, ALE 0.07, PME 0.075, PLE 0.08, AME–AME 0.07, AME–ALE 0.03, PME–PME 0.20, PME–PLE 0.14, AME–PME 0.13, ALE–PLE 0.14, AER width 0.49, PER width 0.73, clypeus AME 0.20, clypeus ALE 0.23. Leg and palp measurements: Palp 1.76 (0.47, 0.23, 0.40, –, 0.66), I 4.11 (1.20, 0.42, 1.05, 0.81, 0.63), II 4.09 (1.20, 0.43, 1.01, 0.81, 0.64), III 3.79 (1.19, 0.41, 0.95, 0.75, 0.49), IV 5.60 (1.71, 0.46, 1.42, 1.31, 0.70). leg formula 4123. Spination: femur I p 0–1, d 1–1; II d 1–1; III d 0–1–1; IV d 1–1–1; patella spineless; tibia I–II v 2–2–2; III p 1–1, r 0–1, v 2–2; IV p 1–1, r 1–1, v 1–1; metatarsus I–II v 2–2; III p 0–1, r 0–1, v 2–2; IV p 1–1, r 0–1, v 1–1. Leg III–IV with small brush of setae distally, on leg IV more distinct. Chelicerae with 2 promarginal and 2 retromarginal teeth; frontally at base of fangs with brush of 6–7 stiff, serrated setae.

Copulatory organ as in diagnosis. Epigyne with indistinct semicircular epigynal field (Figs. 44, 46, 60).



Figs. 50–60. *Serendib muadai* spec. nov. from Nam Kading (L115), male holotype (50–54) and female paratype (55–60). 50–53, 55–57. Habitus, dorsal (50, 55), ventral (51, 56), and lateral (52, 57); 53. Anterior opisthosoma, dorsal; 54. Anterior prosoma, lateral; 58. Prosoma, dorsal; 59. Opisthosoma, frontal, showing spines; 60. Epigyne, ventral.

Copulatory openings situated in posterior half with indistinct rims. Spermathecae membranous (probably affected by the treatment with lactic acid; Fig. 45).

Colour and granulation (in ethanol) (Figs. 55–59). Same as in male except for following differences: Sternal radial markings indistinct. Palpal patella, tibia and tarsus yellowish. One opisthosomal setae present (length 0.36). Dorsal OS with scutum not reaching posterior end, but longer as shown for *S. volans* (Deeleman-Reinhold 2001: fig. 505). Ventral OS without scutum, but posterior part close to spinnerets hardened and bulgy, with two longitudinal and slightly converging lines, lateral patches elongated transversally, reaching lateral OS (Fig. 56).

Variation. Female paratype II with PL 1.8.

Distribution. Known only from the type locality

Zodariidae Thorell 1881

Dankittipakul et al. (2012) recorded the genus *Heradion* Dankittipakul & Jocqué 2004 for the first time from Laos

and described the new species *Heradion depressum* Dankittipakul, Jäger & Singtripop 2012 from the Bolaven Plateau in Champasak Province (L93 That Itou, L95 That Fane).

Selenopidae Simon 1897

Selenops muehlmannorum Jäger & Praxaysombath 2011 was described from Champasak Province (Pakse, L100) from natural habitats (stream bed with rocks and stones) as well from stairs and walls of a temple at Phou Salao. It was the first record of the family for Laos (Jäger & Praxaysombath 2011a).

Sparassidae Bertkau 1872

Heteropoda tetrica Thorell 1897

Material examined. 1 male (SMF 62221), L107, Phou Hippi, by hand, by day, 13.IV.2011. 1 female (SMF 62215), L107, Phou Hippi, by hand, by night, 18.IV.2011.

Heteropoda venatoria (Linnaeus 1767)

Material examined. 1 female (ZMI), L24, Sapanthong Neua, by hand, at night, L. Nophaseud leg. 26.III.2011. 2 males, 1 female (SMF 62241), L107, by night, 18.IV.2011.

Olios Walckenaer 1837

Jäger (2012a) described three new species from Laos: *Olios diao* Jäger 2012 (Bolikhamsay: L115), *Olios jaenicke* Jäger 2012 (Champasak: L98) and *Olios suung* Jäger 2012 (Luang Prabang: L82). All four species (incl. *O. muang* Jäger & Praxaysombath 2009) known from Laos are known from the male sex only. *O. diao* was subsequently recorded from Pakse, Champasak Province (L98).

Sinopoda Jäger 1999

Jäger (2012c) described nine new *Sinopoda* species from Laotian caves: *Sinopoda steineri* Jäger 2012 (female; Luang Nam Tha, L48), *S. tham* Jäger 2012 (male, female; Oudomxai: L79, L104, L105, Luang Nam Tha: L53), *S. sitkao* Jäger 2012 (female; Luang Prabang: L7, Tham Doun Mai), *S. taa* Jäger 2012 (female; Luang Prabang: Tham Nguen, 13 km E Luangprabang), *S. suang* Jäger 2012 (female; Huaphan: L110), *S. peet* Jäger 2012 (female; Huaphan: Tham Ma Liong, 20 km E Sam Neua), *S. guap* Jäger 2012 (female; Khammuan: L72), *S. soong* Jäger 2012 (female; Khammuan: L30), *S. scurion* Jäger 2012 (female; Khammuan: L34). *Sinopoda scurion* represents the first record of an eyeless huntsman spider, *S. guap* exhibits only small lenses of six eyes (AME lacking), *S. soong* has only two small eye lenses.

Thomisidae Sundevall 1833*Cebrenninus rugosus* Simon 1887

Material examined. 1 female (SMF 62234), L107, Phou Hippi, by night, by hand, 18.IV.2011.

First record for Laos.

Salticidae Blackwall 1841*Bianor incitatus* Thorell 1890

Material examined. 1 male, 1 female (SMF 62317), L115, Tad Vang Fong, by day, by hand, 25.III.2011, Logunov det. 2011.

First record for Laos.

Harmochirus zabkai Logunov 2001

Material examined. 1 male (SMF 62324), L107, Phou Hippi, by day, 18.IV.2011, Logunov det. 2011.

Hasarius adansoni (Audouin 1826)

Material examined. 1 male, 1 female (SMF 62327), L107, Phou Hippi, by night, 18.IV.2011, Logunov det. 2011. 1 male (SMF 62319), L107, Phou Hippi, by day, 13.IV.2011, Logunov det. 2011.

First record for Laos.

Hyllus diardi (Walckenaer 1837)

Material examined. 1 female (SMF 62316), L107, Ban Na Me, by day, 24.X.2011, Logunov det. 2011.

First record for Laos.

Plexippus paykulli (Audouin 1826)

Material examined. 3 males (SMF 62330), L107, Phou Hippi, by night, 18.IV.2011, Logunov det. 2011. 1 female (SMF 62322), L107, Phou Hippi, by day, 18.IV.2011, Logunov det. 2011. 2 males, 2 females (SMF 62320), L107, Phou Hippi, by day, 13.IV.2011, Logunov det. 2011. 1 male, 2 females (SMF 62314), L107, Ban Na Me, by day, 24.X.2011, Logunov det. 2011.

Plexippus petersi (Karsch 1878)

Material examined. 10 males, 1 female (SMF 62329), L107, Phou Hippi, by night, 18.IV.2011, Logunov det. 2011. 1 male (SMF 62326), L107, Phou Hippi, by night, 18.IV.2011, Logunov det. 2011. 4 males, 5 females (SMF 62321), L107, Phou Hippi, by day, 13.IV.2011, Logunov det. 2011. 2 males, 2 females (SMF 62315), L107, Ban Na Me, by day, 24.X.2011, Logunov det. 2011. 1 male (SMF 62318), L24, Sapanthong Neua, by night, by hand, L. Nophaseud leg. 18.IV.2011, Logunov det. 2011.

Siler semiglaucus (Simon 1901)

Material examined. 1 female (SMF 62323), L107, Phou Hippi, by day, 18.IV.2011, Logunov det. 2011.

Thiania bhamoensis Thorell 1887

Material examined. 1 female (SMF 62325), L107, Phou Hippi, by night, 18.IV.2011, Logunov det. 2011. 1 male (SMF 62326), L107, Phou Hippi, by night, 18.IV.2011, Logunov det. 2011.

First record for Laos.

Thyene imperialis (Rossi 1846)

Material examined. 1 male, 1 female, 1 juvenile (SMF 62328), L107, Phou Hippi, by night, 18.IV.2011, Logunov det. 2011.

First record for Laos.

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References

- Bayer, S. 2011. Revision of the pseudo-orbweavers of the genus *Fecenia* Simon, 1887 (Araneae, Psecchridae), with emphasis on their pre-epigyne. *Zookeys*, 153: 1–56.
- Bayer, S. 2012. The lace-sheet-weavers—a long story (Araneae: Psecchridae: *Psecchrus*). *Zootaxa*, 3379: 1–170.
- Brignoli, P. M. 1981. New or interesting Anapidae (Arachnida, Araneae). *Revue Suisse Zool.*, 88: 109–134.
- Dankittipakul, P., Jäger, P. & Singtripop, T. 2012. First record of the genus *Heradion* Dankittipakul & Jocqué, 2004 from Laos with description of a new species (Araneae, Zodariidae). *Bull. Br. Arachnol. Soc.*, 15 (7): 231–234.
- Deeleman-Reinhold, C. L. 1993. A new spider genus from Thailand with a unique ant-mimicking device, with description of some other castianeirine spiders (Araneae: Corinnidae: Castianeirinae). *Nat. Hist. Bull. Siam Soc.*, 40: 167–184.
- Deeleman-Reinhold, C. L. 2001. Forest spiders of South East Asia: with a revision of the sac and ground spiders (Araneae: Clubionidae, Corinnidae, Liocranidae, Gnaphosidae, Prodidomidae and Trochanteridae). Brill, Leiden, 591 pp.
- Deeleman-Reinhold, C. L. 2009. Description of the lynx spiders of a canopy fogging project in northern Borneo (Araneae: Oxyopidae), with description of a new genus and six new species of *Hamataliwa*. *Zool. Med. Leiden*, 83: 673–700.
- Goetzinger, D. 2011. Amazing rainforest spiders in Laos. Unpublished, bound collection of printed digital photos, 156 pp.
- Harvey, M. S., Austin, A.D. & Adams, M. 2007. The systematics and biology of the spider genus *Nephila* (Araneae: Nephilidae) in the Australasian region. *Invertebr. Syst.*, 21: 407–451.
- Huber, B. A. 2011. Revision and cladistic analysis of *Pholcus* and closely related taxa (Araneae, Pholcidae). *Bonner Zool. Beitr.*, 58: 1–509.
- Jäger, P. 2005. New large-sized cave-dwelling *Heteropoda* species from Asia, with notes on their relationships (Araneae: Sparassidae: Heteropodinae). *Revue Suisse Zool.*, 112: 87–114.
- Jäger, P. 2007. Spiders (Araneae) from Laos with descriptions of new species. *Acta Arachnol.*, 56: 29–58.
- Jäger, P. 2011. Revision of the genera *Nilus* O. Pickard-Cambridge 1876, *Sphedanus* Thorell 1877 and *Dendrolycosa* Doleschall 1859 (Araneae: Pisauridae). *Zootaxa*, 3046: 1–38.
- Jäger, P. 2012a. New species of the genus *Olios* Walckenaer 1837 (Araneae: Sparassidae) from Laos. *Zootaxa*, 3228: 61–68.
- Jäger, P. 2012b. A review on the spider genus *Argiope* Audouin 1826 with special emphasis on broken emboli in female epigynes (Araneae: Araneidae: Argiopinae). *Beitr. Araneol.*, 7: 272–331, 358–362.
- Jäger, P. 2012c. Revision of the genus *Sinopoda* Jäger 1999 in Laos with discovery of the first eyeless huntsman spider species (Sparassidae: Heteropodinae). *Zootaxa*, 3415: 37–57.
- Jäger, P. 2012d. Asian species of the genera *Anahita* Karsch 1879, *Ctenus* Walckenaer 1805 and *Amauropelma* Raven, Stumkat & Gray 2001 (Arachnida: Araneae: Ctenidae). *Zootaxa*, 3429: 1–63.
- Jäger, P. & Dankittipakul, P. 2010. Clubionidae from Laos and Thailand (Arachnida: Araneae). *Zootaxa*, 2730: 23–43.
- Jäger, P. & Praxaysombath, B. 2009. Spiders from Laos: new species and new records (Arachnida: Araneae). *Acta Arachnol.*, 58 (1): 27–51.
- Jäger, P. & Praxaysombath, B. 2011a. *Selenops muehlmannorum* spec. nov. from Southern Laos (Araneae: Selenopidae). *Zootaxa*, 2883: 65–68.
- Jäger, P. & Praxaysombath, B. 2011b. Spiders from Laos with forty-three new records and first results from the provinces Bolikhamsay and Champasak (Arachnida: Araneae). *Acta Arachnol.*, 60(1): 9–31.
- Jäger, P. & Wunderlich, J. 2012. New species of the spider genus *Otacia* Thorell 1897 (Araneae: Corinnidae) from China, Laos and Thailand. *Beitr. Araneol.*, 7: 251–271, 352–357.
- Kuntner, M. 2005. A revision of *Heremia* (Araneae: Nephilidae: Nephilinae), the Australasian ‘coin spiders’. *Invertebr. Syst.*, 19: 391–436.
- Kuntner, M. 2007. A monograph of *Nephilengys*, the pantropical ‘hermit spiders’ (Araneae, Nephilidae, Nephilinae). *Syst. Ent.*, 32: 95–135.
- Levi, H. W. 1983. The orb-weaver genera *Argiope*, *Gea*, and *Neogea* from the Western Pacific region (Araneae: Araneidae, Argiopinae). *Bull. Mus. Comp. Zool.*, 150: 247–338.
- Lin, Y. C. & Li, S. Q. 2009. First described *Patu* spiders (Araneae, Symphytognathidae) from Asia. *Zootaxa*, 2154: 47–68.
- Lin, Y., Li, S. & Jäger, P. 2012. Two new species of the family Tetrablemmidae (Araneae) from Laos and Malaysia. *Zootaxa*, 3475: 55–64.
- Murphy, F. & Murphy, J. 2000. An introduction to the spiders of South East Asia with notes on all the genera. *Malaysian Nat. Soc.*, Kuala Lumpur, 625 pp. + 32 pl.
- Ono, H. 2009. The Spiders of Japan with keys to the families and genera and illustrations of the species. Tokai Univ. Press, Kanagawa, xvi + 739 pp.
- Platnick, N. I. & Shadab, M. U. 1979. A review of the spider genera *Anapisona* and *Pseudanapis* (Araneae, Anapidae). *Amer. Mus. Novit.*, 2672: 1–20.
- Song, D. X., Zhu, M. S. & Chen, J. 1999. The spiders of China. Hebei Sci. Technol. Publ. House, Shijiazhuang, 640 pp.
- Tanikawa, A., Chang, Y. H. & Tso, I. M. 2011. Taxonomic revision of Taiwanese and Japanese *Cyrtophora* spiders hitherto identified with *C. moluccensis* (Arachnida, Araneae), using molecular and morphological data. *Acta Arachnol.*, 59: 31–38.
- Wunderlich, J. 2011. New extant taxa of the spider family Theridiosomatidae (Araneae) from Laos and on some fossil taxa. *Beitr. Araneol.*, 6: 427–444.
- Xu, X. & Yin, C. M. 2001. A new species of the genus *Macrothele* from China (Araneae: Hexathelidae). *J. Nat. Sci., Hunan Norm. Univ.*, 24: 65–66, 72.
- Yin, C. M., Wang, J. F., Zhu, M. S., Xie, L. P., Peng, X. J. & Bao, Y. H. 1997. Araneidae. *Fauna Sinica* 35. Science Press, Beijing, 460 pp.
- Zhang, J. X., Zhu, M. S. & Song, D. X. 2004. A review of the Chinese nursery-web spiders (Araneae, Pisauridae). *J. Arachnol.*, 32: 353–417.
- Zhu, M. S. 1998. *Fauna Sinica: Arachnida: Araneae: Theridiidae*. Science Press, Beijing, xi + 436 pp.
- Zhu, M. S., Song, D. X. & Zhang, J. X. 2003. *Fauna Sinica: Invertebrata Vol. 35: Arachnida: Araneae: Tetragnathidae*. Science Press, Beijing, vii + 418 pp.

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